ABSTRACT

An optical code division multiple access communication system using a processor processes at least one collimated input beam which has been modulated with a data signal to produce multiple time-delayed output beams. The multiple time-delayed output beams are spatially distributed and independently phase shifted. An integration lens receives the phase modulated output beams and reintegrates the phase modulated output beams into a single encoded beam with a time series chip sequence. The integrated encoded beam is transmitted. A receiving system includes a processor to process the encoded collimated light beams received from a transmitter to produce multiple time-delayed output beams. The multiple time-delayed output beams are spatially distributed and independently phase shifted. An integration lens receives the phase-shifted output beams and reintegrates the phase-shifted output beams into a single decoded beam.